A Performance-Related Study of Reverse Mergers Using Private Investment in Private Equity (PIPE) Strategies

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***Abstract*— A "reverse merger" (RM) has become a popular transaction that allows a private company to take over a publicly traded firm and obtain their exchange listing. RMs have significantly outnumbered IPOs as a mechanism for going public in the U.S. since 2002. Moreover, foreign firms entering the U.S. have accounted for over 40% of RMs taking place on U.S. exchanges from 2008 - 2013, as compared to approximately 10% of all cross-listings and 7% of all IPOs during the same period. Chinese firms have been participants in 63% of all foreign RMs since 2008. This study is the first to focus on foreign and domestic RM's use of PIPEs (Private Investment in Public Equity). When compared to RMs transacted between two U.S. firms, this analysis finds Chinese firms who engage in RMs through the use of PIPES (traditional and structured), on average, 1) raise over 400% more initial investment, 2) experience higher post-merger market capitalization valuations at closing and post-merger, 3) take place on higher level U.S. stock exchanges, 4) have a higher rate of survival (influenced by sector) and 5) experience significantly better short and long-term buy and hold returns.**

Keywords-Chinese; Reverse Merger; Reverse Takeover; PIPE

I. INTRODUCTION

The reverse merger (RM) process is an acquisition where the target firm's management seeks a public entity with which to merge and obtain their exchange listing [1]. As opposed to cross-listing, an RM (sometimes termed a "reverse takeover") 1) avoids most SEC scrutiny [2], 2) can be completed quickly (1 to 2 months versus 4 to 14 months) [3], 3) is significantly less expensive with no fundraising or underwriter fees [3, 4], 4) allows motivated participants to extract cash from the global market [5] and 5) avoids substantial ownership dilution [6].

RMs have significantly outnumbered IPOs as a mechanism for going public in the United States since 2002 [7, 8]. In the period January 1, 2008, through December 31, 2013, foreign firms entering the U.S. have accounted for over 40% of RMs taking place on U.S. exchanges [8]. Despite the large number of foreign RM transactions, there have been few related academic studies. As such, we focus on Chinese firms as they represent the vast majority of the foreign RMs which have taken place in the U.S. (63% from 2008-2014). Another motivation to study Chinese RMs stems from the financial media accusations of accounting fraud from 2010 – 2012, which led to approximately 47 Chinese RMs being delisted [7, 9, 10]. Although many accusations were not substantiated [11], Chinese listed firms, in general, suffered and lost over 72% market capitalization between 2010 and 2012. In February 2012 The Economist reported the news coverage was exaggerated and that investors should not assume all Chinese firms were not audited properly. Since 2012, Chinese RM numbers are rapidly growing again and the market losses were recovered in 2015. As Figure 1 depicts, 587 Chinese RMs were consummated during 2004 - 2014, representing over $54 billion in combined capitalization [8]. As the chart reflects, Chinese RMs have grown at a rate of 32 – 50 % per year since 2012. This rapid resurgence in the number of Chinese RMs and ongoing investigations have investors questioning the related adjusted risk returns and help motivate this study.

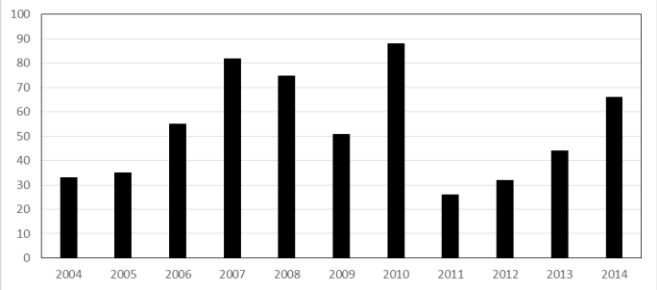

Figure 1 - Number of Chinese Reverse Mergers by year 2004-2014

This paper is the first to provide the influence of PIPEs (traditional and structured) on both foreign and domestic firms that transact RMs on U.S stock exchanges. We also analyze their initial and short-term capitalization, levels of stock exchange entry, industries, and short to long term buy and hold stock performance for those that use PIPEs versus RMs that do not.

This study finds Chinese RMs, when compared to U.S. RMs, overall, are significantly bigger, grow assets faster, are less likely to use PIPES but have significantly larger transactions and hold more insider stock. In addition, when compared to RMs transacted between two U.S. firms, on average, Chinese companies who engage in RMs through the use of PIPES 1) raise over 400% more initial investment, 2) experience higher post-merger market capitalization valuations, 3) take place on advanced level U.S. stock exchanges, 4) have a higher rate of survival and 5) experience significantly better short- and long-term performance. Our study also finds PIPE financing to be a major source of funding for the Chinese RMs that locate on higher exchanges as opposed to very few U.S. RMs. and those that open on higher exchanges using PIPES have a higher chance of survival than those that do not use PIPES or that open on the OTC exchange.

The remainder of the paper proceeds as follows. Section II reviews the relevant literature. Section III describes the data

DOI: 10.5176/2010-4804_4.4.391

sample and provides financial transaction summaries. Section IV presents the empirical analysis results and Section V concludes and suggests implications for investors.

II. Literature Review

Despite the significant number of reverse mergers, there have been few related academic studies. Gleason, Rosenthal, and Wiggins (2005) review 121 RMs that took place on the NYSE and NASDAQ-AMEX exchanges in 1987 through 2001 and find significant short-term announcement gains for many transactions [12]. Gleason, Jain, and Rosenthal (2006) compare RMs to traditional and self-underwritten IPOs [4]. They study 119 RM transactions between companies listed on the major stock exchanges between 1986 and 2002 and find RMs and self-underwritten IPO companies overall are smaller with lower profitability and outperform traditional IPOs over the first few months. Adjei, Cyree and Walker (2008) study 286 U.S. RMs from 1990 through 2002, and find 42% of RMs are delisted within three years of going public [13]. Carpentier, Cumming, and Suret (2012) find Canadian companies that go public using RMs generally have poor performance after going public [14]. Floros and Shastri (2009) study the decision to go public comparing RMs between U.S. based private and public firms listed on U.S. stock exchanges versus penny stock IPOs [6]. They argue companies involved with RMs are information asymmetric as minimal stock is issued to the public. Floros and Sapp (2010) find a significant percentage of U. S. RM shell companies are profitable short-term investments with returns of 48.1% over the first three months [2].

There are very few studies of RMs involving foreign firms. Makamson (2010) studies RMs from 1994 through 2008 and argues overseas RM participants are motivated to raise capital in a distant market [15]. Jindra, Voetmann, and Walkling (2012) contrast the performance of Chinese RMs to Chinese IPOs and overall find Chinese IPO firms outperform their RM counterparts [16]. Lee, Li, and Zhang (2013) find Chinese RMs are more profitable and have higher longevity over their first three years than matched U.S. RMs [17]. DuVal and Quilliam (2015) find Chinese RMs experienced higher long-term returns when compared to U.S. cross-listed Chinese firms, the Russell 2000 and U.S. RMs from 2008 through 2014 [18].

There is extensive academic study on the performance of companies using private placements (PIPES), however, empirical studies of the use of PIPES in RMS has been scant. Hertzel, Lemmon, Linck, and Rees (2002) study the long- term performance of companies issuing PIPES and find positive returns at announcement but become abnormally low the following three years [19]. Hillion and Vermaelen (2004) also show many PIPE funded firms perform poorly in the long term [20]. Gleason, Rosenthal, and Wiggin's (2005) report their sample of rather large public U.S. RM participants using PIPEs are poor performers and deemed a high-risk choice for going public [12]. In contrast, DuVal and Quilliam's (2015) results, despite many findings in the literature to the contrary, reveal a statistically significant relationship between the use of PIPES and positive returns [18]. These conflicting results motivate this detailed study of the influence of PIPES in foreign and domestic RMs.

In summary, most previous studies have focused on reverse mergers between companies that are already operating and listed on a U.S. or Canadian stock exchange. Few studies to date have focused on foreign firms that conduct reverse mergers in the U.S., particularly those funded with PIPES. As foreign RMs have once again significantly increased in numbers, this topic is important to investors and others studying RMs.

III. Data Sample and Financial Transaction Summaries

Generally, RM transaction data is not readily available, with most participating firms traded on pink sheets or the Over the Counter Bulletin Board (OTCBB) and not followed by popular financial transaction sites. We obtain most of the detailed RM data from PrivateRaise, a subsidiary of DealFlow Media (DFPR). PrivateRaise has tracked RM deals in detail since January 2004. From 2004 – 2013, 521 RMs were consummated involving Chinese firms. Since 2008, DFPR followed RM transactions in significantly more detail, which leads to our 310 Chinese and 492 U.S. RM six year subsample that took place between 2008 and 2013. Although PrivateRaise reports the average stock price at RM closing during this period is $3.51 for Chinese RMs and $2.54 for U.S. RMs, they do not collect ongoing stock price data. We obtain daily stock data and financial statement information from 8-K/As, 8-Ks, 10Ks, SC-14F1s, Bloomberg, and Yahoo Finance.

Due to smaller companies, on average, participating in RMs with information asymmetry, the literature argues these transactions not be compared to traditional IPOs [1, 2, 6]. Therefore, like DuVal and Quilliam (2015), we compare Chinese RMs to those consummated between two U.S. firms that took place during the same period [18].

Sjostrom (2008) argues access to PIPE financing (typically supplied by hedge funds) is the primary reason firms choose RMs as the vehicle by which to go public, as they have no other alternatives for capital [1]. Table 1 reports 34.19% (106 of 310) of Chinese RMs use PIPEs to fund their RMs compared to 41.26% (203 of 492) of U.S. RMs. These percentages of RMs using PIPES are significantly lower than the average of 67.23% reported by Floros and Shastri (2009) in their earlier U.S. based RM sample [6]. In contrast, this current study's results are much higher than the 20% reported in Gleason's 2005 sample of U.S. RM's that used PIPES between 1987 and 2001. Table 1 also reveals Chinese RMs raise over 426% more capital (to include PIPEs), on average, at the time of the transaction than U.S. RMs ($7.47 million versus $1.75 million). This result appears to support DuVal and Quilliam's (2015) hypothesis that Chinese RM participants seek quick infusions of capital [18].

Table 1 - Chinese and U.S. Reverse Mergers Summary Statistics 2008-2013

	China	U.S.
Total Number of Reverse Merger Transactions:	310	492
Total Number of Reverse Merger + PIPE Transactions:	106 (34.19%)	203 (41.26%)
Total Dollars Raised in Reverse Merger + PIPE Transactions:	$792.7 M	$356.1 M
Average Dollars Raised in Reverse Merger + PIPE Transactions:	$7.47 M	$1.75 M

As reflected in Panel A of Table 2, the average market capitalization of Chinese RMs ($75.9 million) at closing is over 47% higher than U.S. RMs ($51.5 million). In comparison, Gleason, Rosenthal and Wiggins (2005) find the values of their 1986-2002 U.S. RM sample to have a mean of $8.4 million (median of $1.76 million) [12]. After four weeks, on average, the Chinese RMs' market capitalization grows by over 26% ($75.9 M to $95.7M) versus U.S. RM's growth of 12% ($51.5 M to $57.7 M). Overall, these results appear to support DuVal and Quilliam's (2015) hypothesis that Chinese RMs seek more capital and grow assets at a faster pace than U.S. RMs [18].

Panel B of Table 2 compares the lowest, average and highest post-merger stock prices at the transaction's closing to the same values four weeks later. Overall, Chinese RMs at transaction closing open at prices over 50% higher than U.S RMs ($3.51 compared to $2.54) and, during the first four weeks of operation, the Chinese RMs average stock price increases over 27% ($3.51 to $4.46) as compared to the U.S. RM price decrease of approximately 4% ($2.54 to $2.45).

Table 2 - China and U.S. RM market capitalization comparisons 2008-2013

Panel A: Post-merger China and U.S. market capitalization comparisons

	China Market Cap			U.S. Market Cap		
Post-Merger Valuation Metrics	**Low**	**Average**	**High**	**Low**	**Average**	**High**
At Reverse Merger Closing(millions)	$0.1	$75.9	$697.2	$0.3	$51.5	$633.6
4-wk Post-Closing Stock Price(millions)	$0.1	$95.7	$971.0	$0.2	$57.7	$692.3
4-wk Post-Closing VWAP(millions)	$0.1	$88.1	$673.1	$0.2	$54.4	$689.8

Panel B. Post-merger China and U.S. stock price comparisons

	China Stock Price			U.S. Stock Price		
Post-Merger Valuation Metrics	**Low**	**Average**	**High**	**Low**	**Average**	**High**
At Reverse Merger Closing	0.01	3.51	35.33	0.01	2.54	16.88
4-wk Post-Closing Stock Price	0.01	4.46	55.94	0.01	2.45	16.22
4-wk Post-Closing VWAP	0.01	4.22	54.87	0.01	2.37	13.06

Table 3 reveals that Chinese RMs have higher averages than U.S. RMs for both ownership percentages issued in the share exchange without PIPES (86.3% versus 73.4%) and with PIPEs (85.89% versus 74.1%). Although not reported in this table, 19% of Chinese RMs during this period involved shell companies as compared to 64% of U.S. RMs. These results indicate Chinese and U.S. RMs release significantly more stock to the public as compared to the 3% reported by the Floros and Sapp (2010) RM shell company sample [2].

Table 3 - Percentage ownership summary statistics for Chinese and U.S. RMs 2008-2013

	China			U.S.		
Percentage Ownership Metrics	**Low**	**Average**	**High**	**Low**	**Average**	**High**
Percentage Issued in Share Exchange	0.00	86.34	100.00	1.30	73.40	100.00
Percentage Issued PIPE	0.10	36.16	504.66	0.10	37.65	275.88
Percentage Issued in Share Exchange + PIPE	14.60	85.89	100.00	1.60	74.10	100.00

Table 4 reports Chinese RMs are far more likely to take place on higher level stock exchanges than U.S. RMs, as 7.7% (24 of 310) of Chinese firms enter on the NYSE or NASDAQ versus only 1.4% (7 of 492) of the U.S. RMs. As found in previous studies (e.g., Gleason, Rosenthal, and Wiggins, 2005; DuVal and Quilliam, 2015), this table shows most Chinese (78.71%) and U.S. RMs (84.15%) take place on the OTTBB exchange [12, 18]. Also PIPE financing appears to be an important source of funding for the Chinese RMs that locate on more prestigious exchanges as opposed to U.S. RMs, which show a limited use of PIPEs. Although not reported in this table, regression analysis shows Chinese RMs that open on higher exchanges (NYSE or NASDAQ) using PIPES have a 38% higher chance of survival than those that do not use PIPES and 41% higher than those that open on the OTC stock market.

Table 4 - Initial exchange listing summary statistics for Chinese and U.S. RMs 2008-2013

	China			U.S.		
Exchange	**Reverse Merger**	**Reverse Merger + PIPE**	**PIPE Total**	**Reverse Merger**	**Reverse Merger + PIPE**	**PIPE Total**
NASDAQ-GS	0	0	0.0 M	0	0	0.0 M
NASDAQ-GM	9	8	12.3 M	3	1	1.1 M
NASDAQ-CM	14	12	183.9 M	3	1	10.8 M
NYSE	1	1	11.8 M	1	0	0.0 M
OTC BB	244	76	482.2 M	414	185	323.8 M
OTC	14	0	0.0 M	41	7	14.6 M
Never Trade	28	10	102.5 M	29	9	5.8 M
Totals	310	106	792.7 M	492	203	356.1 M

Table 5 breaks down the samples by industry for the period. When compared to U.S. RMs, Chinese RMs are more inclined to do business in basic materials (10.3% to 4.9%) and consumer/retail (31.2% to 9.8%). U.S. RMs are more concentrated in energy (14% to 5.1%), financial institutions (3% to 1.3%), industrial (19.5% to 11%) and media (7.9% to 2.9%).

Table 5 - Initial industry distribution for Chinese and U.S. RMs 2008-2013

	China			U.S.		
Industry	Reverse Merger	Reverse Merger + PIPE	PIPE Total	Reverse Merger	Reverse Merger + PIPE	PIPE Total
Basic Materials	32	18	177.8 M	24	15	9.1 M
Consumer/Retail	99	37	199.3 M	48	18	26.7 M
Energy	16	9	78.9 M	69	34	67.5 M
Financial Institutions	4	0	0.0 M	15	4	0.9 M
Healthcare	49	11	105.1 M	56	23	66.6 M
Industrial	34	8	87.5 M	96	57	55.2 M
Media	9	2	8.9 M	39	11	28.9 M
Real Estate	6	3	29.6 M	5	2	1.2 M
Technology	48	13	47.1 M	74	33	74.8 M
Telecommunications	7	4	38.2 M	15	5	12.2 M
Unknown	6	2	20.3 M	1	1	13.0 M
Totals	310	106	792.7 M	492	203	356.1 M

IV. Empirical Results

In an effort to make direct comparisons of returns over time, we use formulas from previous RM studies. Like Gleason, Jain, and Rosenthal (2006), we calculate buy and hold returns (BHR) for N firms as [4]:

$$\text{Buy and Hold Return} = \sum_{i=1}^{N} w_i \left[\prod_{t=2}^{T_i} (1+R_{it}) - 1 \right] \times 100$$

where:

w_i = average holding period weight for stock i

R_{it} = stock i's return on day t

T_i = delisted date or the end of the holding period, whichever comes first

Following Floros and Sapp (2010), we use the Fama-French three-factor regression model as a benchmark, where the return of a portfolio of reverse mergers is more than the one-month T-bill return [2]. The BHR abnormal returns are derived with an equally weighted portfolio. Similar results were experienced in a value-weighted portfolio.

Many of these Chinese RM stocks are initially thinly traded and therefore have significant spreads between the bid and ask pricing. Floros and Sapp (2010) find their median RM shell companies' range is close to 45% [2]. We follow the recommendations made by Fisher, Weaver and Webb (2009) and Floros and Sapp (2010), and use the midpoint of the spread to mitigate the bid-ask bounce [2, 21].

Using daily returns beginning 30 days before the RM, we study the performance of the 272 Chinese and 463 U.S. RM participants that traded stock before and after they consummate the transaction. We begin by examining the returns from 30 days prior to 30 days after the RM is transacted. U.S. RMs, on average, experience an overall return of approximately 15% during the 60 day period. The total sample of Chinese RMs (with and without the use of PIPES) has an average return of approximately 35%. Although the Chinese RM result appears significant, Floros and Sapp (2010) report their RM shell sample firms experience a 54% increase in this 60 day window [2].

Also, as other studies have shown (e.g., Gleason, Rosenthal, and Wiggins, 2005; Floros and Sapp, 2010) and the graph depicts, the results indicate evidence of an increase in wealth to the public firm's stockholders after the announcement dates [2, 4]. Gleason, Rosenthal and Wiggins (2005) and Floros and Sapp (2010) have similar outcomes and suggest insiders are investing more capital and increasing the price as a successful transaction becomes more evident [2, 4]. There is also a price correction for both U.S. and Chinese RMs within a few day window following the consummation date that appears to reflect the market's reaction to the SEC documents required within four days following the transaction. Overall, however, Chinese RMs significantly outperform U.S. RMs over the 60 day period.

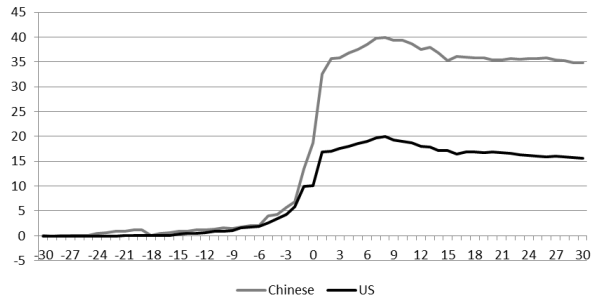

Figure 2 - Reverse merger [-30 day, +30 day] returns comparison of Chinese and U.S. RMs 2008 - 2013

Prior research (e.g., Gleason, Rosenthal, and Wiggins, 2005; Floros and Shastri, 2009) reports RMs' BHRs are different when comparing those that use PIPES and those firms that do not [2, 6]. Table 6 separates the Chinese and U.S. RM sample into PIPE/non-PIPE transactions and presents the short- and long-run BHRs for various event windows. The total sample varies by year for each set as noted in column N in each panel, revealing that the majority of transactions do not use PIPES and fewer firms exist over time. The Chinese and U.S. RM's results report performance for the period January 1, 2008, through December 31, 2013. The stocks are equally valued, and the BHRs represent the cumulative market change over the relevant event window. Panel A reflects results for those firms that do not use PIPES, and Panel B reports results for those companies that use PIPE financing at the time of the initial transaction. The results are significantly different when comparing Chinese RM to U.S. RM returns, with and without the use of PIPES.

Table 6, Panel A's first event window (-30, -1) reports the change in price during the 30 days before the RM transaction. Chinese RM firms, on average, that do not use PIPES realize a 9.88% return as opposed to the U.S. RM non-PIPE return of 4.83%. Over time, the Chinese non-PIPE RMs never yield a negative return and those that survive yield a 23.65% average return over their first four years. The U.S. non-PIPE sample, however, although profitable over time, yields negative returns over the first 90 days and for those firms that survive, 6.51% over the first four years as opposed to the Chinese RM four-year return of 23.65%.

Table 6, Panel B shows all the Chinese PIPE RM event windows to yield higher returns than the U.S. PIPE RMs as well

as Panel A Chinese non-PIPE RMs. Moreover, the average return for Chinese PIPE RMs is 16.67% as compared to 13.57% for U.S. PIPE RMs for the same 30 days before the RM consummation. The first 90-day window after the RM transaction yields 35.96% for Chinese PIPE RMs versus the U.S. PIPE RM's 15.81%. Floros and Sapp (2010) report RMs formed with shell companies using PIPES experience a significantly higher yield of 48% in the first 90 days [2]. Over the first four years, Chinese PIPE RMs, on average, return 32.02% compared to U.S. PIPE RM return of 8.44%. These results are significantly higher than the negative 2.1% two year RM shell results reported by Floros and Sapp (2010), but overall, consistent with other previous studies (e.g., Gleason, Rosenthal, and Wiggins, 2005; Floros and Shastri, 2009) that report RMs using PIPEs experience higher returns [2, 4, 6]. In summary, comparing results in Panels A and B with respect to short- and long-run returns, there is a significant improvement for RMs that use PIPES over those that do not.

Also, as shown by DuVal and Quilliam (2015), PIPE use appears to influence the number of firms that survive [18]. Table 6, Panel A, reveals approximately 58% (102 of 176) of the Chinese RMs that do not use PIPES survive two years and 26% (46 of 176) four years. In contrast, approximately 23% (62 of 269) of U.S. non-PIPE RMs survive two years and 19% (51 of 269) four years. Over 82% (79 of 96) of Chinese PIPE RMs survive two years as compared to 58% of non-PIPE Chinese RMs. Over 61% (59 of 96) of Chinese PIPE RMs survive four years as compared to the 26% not transacting PIPES. U.S. PIPE RMs realize a similar difference with over 24% (47 of 194) PIPE firms surviving two years as opposed to 19% of non-PIPE U.S. RMs. Floros and Shastri (2009) find similar PIPE influence on shell RM existence [6]. They report 90.20% of shell PIPE RMs survive three years as opposed to 27.5% of firms unable or unwilling to receive PIPE financing. Overall, Chinese RMs have a have a higher rate of survival than U.S. RMs in the first two years (58% versus 26%) and four years (34% versus 20%). Both rates are significantly higher than the Gleason, Rosenthal and Wiggins (2005) study of 1981-2001 more prestigious stock exchange RMs, which reports 46% of their sample survived two years [12]. Although they were exclusively studying U.S. RM participants, results suggest U.S. RM firms are not getting financially stronger.

Table 6 - Chinese and U.S. reverse merger performance comparison of transactions with and without PIPE financing

Panel A. Reverse mergers performance without PIPE financing

	China			U.S.		
Event Window	N	BHR	*t*-statistic	N	BHR	*t*-statistic
[-30, -1]	176	9.88	2.89***	269	4.83	4.44***
[0, +1]	176	14.83	3.15***	269	3.96	4.17***
[0, +3]	176	15.56	3.44***	269	3.88	3.83***
[0, +7]	176	15.89	3.58***	267	3.45	3.81***
[0, +14]	175	14.56	3.73***	264	-1.58	3.72***
[0, +30]	171	15.02	4.69***	248	-3.74	3.21***
[-30,+60]	170	16.44	4.71***	244	3.54	3.09***
[0, +90]	168	15.78	4.45***	243	-0.76	3.19***
[0, +180]	155	17.36	4.01***	233	2.93	3.28***
[0, +1 yr]	138	18.93	3.86***	147	3.24	2.97***
[0, +2 yr]	102	22.07	3.77***	62	4.59	2.84***
[0, +3 yr]	76	23.11	3.26***	55	5.88	2.77***
[0, +4 yr]	46	23.65	2.75***	51	6.51	2.66***

Panel B. Reverse mergers with PIPE financing

	China			U.S.		
Event Window	N	BHR	*t*-statistic	N	BHR	*t*-statistic
[-30, -1]	96	16.67	2.89***	194	13.57	3.15***
[0, +1]	96	22.86	3.78***	194	12.82	2.87***
[0, +3]	96	30.94	3.81***	194	12.95	2.93***
[0, +7]	96	33.77	4.76***	194	14.03	3.12***
[0, +14]	96	29.03	4.53***	192	15.44	3.21***
[0, +30]	96	27.82	4.28***	187	14.32	3.33***
[-30,+60]	95	37.22	4.53***	183	16.73	3.42***
[0, +90]	94	35.96	3.96***	177	15.81	3.77***
[0, +180]	91	34.85	3.74***	172	11.07	3.55***
[0, +1 yr]	87	33.51	3.13***	126	9.55	2.88***
[0, +2 yr]	79	32.73	3.02***	65	9.41	2.74***
[0, +3 yr]	64	32.42	2.91***	51	8.89	2.69***
[0, +4 yr]	59	32.02	2.88***	47	8.44	2.67***

Further analysis shows the Chinese RMs that are most profitable and likely to survive over two years are in the energy and technology sectors. The most successful U.S RMs are in the healthcare and industrial sectors.

V. Concluding Remarks and Implications for Investors

Although there has been some research of U.S. participants in RMs, there has been limited study focused on the foreign companies that come to the U.S. through an RM. These transactions are important as foreign firms entering the U.S. have accounted for over 40% of RMs taking place on U.S. exchanges from 2004 - 2013, as compared to approximately 10% of all cross-listings and 7% of all IPOs during the same period. This study focuses on RMs that involve Chinese companies merging with U.S. firms, which have accounted for over 63% of RMs into the U.S. since 2008. Although accusations of fraud resulted in a significant decline in the number of foreign RMs in 2011, Chinese RMs have experienced a rapid growth rate of 32 – 50 % per year since 2012. This swift resurgence in the number of Chinese RMs and ongoing investigations have investors questioning the related adjusted risk returns and motivated this study. This paper helps to fill this research gap as it examines and compares the financial transactions and performance of foreign and U.S. RMs, and is the first to provide insight on the influence of PIPEs (traditional and structured) on both foreign and domestic firms that transact RMs on U.S stock exchanges.

Overall, this analysis finds Chinese RMs, when compared to U.S. RMs, are significantly bigger, grow assets faster, are less include likely to use PIPES but have significantly larger transactions and hold more insider stock. In addition, when

compared to RMs transacted between two U.S. firms, on average, Chinese companies who engage in RMs through the use of PIPES 1) raise over 400% more initial investment, 2) have higher post-merger market capitalization valuations, 3) experience higher short-term returns, 4) take place on more prestigious U.S. stock exchanges (NASDAQ and NYSE), 5) have a higher rate of continued existence over the first two and four year periods, 6) chances for survival may be influenced by sector, and 7) contrary to many findings in the literature, experience significantly better long-term performance. In addition, PIPE financing appears to be a primary source of funding for the Chinese RMs that locate on higher exchanges as opposed to very few U.S. RMs, and Chinese RMs that open on higher exchanges using PIPES have a higher chance of survival than those that do not use PIPES or that open on the OTC stock market.

In summary, although RMs do seem to involve considerable risk, many Chinese and U.S. RMs generate positive long-term performance for shareholders of the new entity, particularly those that raise capital using PIPES. We believe these results have significant implications for investors, future researchers, and the SEC to better understand and identify the characteristics of foreign RMS that are more likely to fail.

Future research may find compelling results analyzing the differences in performance for RMs using structured versus traditional PIPES.

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